

In The Claims

Applicant submits below a complete listing of the current claims, with any insertions indicated by underlining and any deletions indicated by strikeouts and/or double bracketing.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (Currently amended) A method for transmitting digital messages, on execution of an instruction sequence by the microprocessor, through output terminals (22) of a monitoring circuit (18) integrated to the microprocessor (12), at least one of said digital messages being representative of characteristic data stored by the monitoring circuit on detection of a jump in the execution of the instruction sequence from an initial instruction to a destination instruction different from the instruction following the initial instruction in the instruction sequence, ~~characterized in that it comprises~~ comprising, for the transmission of a digital message, the steps of:

determining whether the jump is associated with a jump instruction of the instruction sequence for which data representative of the destination instruction address of the jump is explicitly indicated in the instruction;

if yes, assigning a first value to a first set of bits (~~Teode~~) of the digital message, and if not, assigning a second value to the first set of bits;

if the first set of bits is at the second value, assigning to a second set of bits (~~BType~~) of the digital message a third value identifying the jump from among several types of jumps; and

transmitting the digital message.

2. (Currently amended) The method of claim 1, further comprising the step of assigning to a third set of bits (~~ICNT~~) of the digital message a value corresponding to the number of instructions executed by the microprocessor (12) since the last executed instruction of the instruction sequence corresponding to a digital message associated with a jump.

3. (Currently amended) The method of claim 1, further comprising the step of, if the first set of bits is at the second value, assigning to a fourth set of bits (~~ADDR~~) of the digital message a value representative of the address of the destination instruction.

4. (Original) The method of claim 1, in which a jump type corresponds to a jump resulting from a jump instruction of the instruction sequence containing the reference of a register in which are stored data representative of the destination instruction address.

5. (Currently amended) The method of claim 1, in which a jump type corresponds to a jump forced by the microprocessor (42), the destination instruction corresponding to an instruction of a series of specific instructions which does not belong to the instruction series.

6. (Currently amended) The method of claim 1, in which a jump type corresponds to a jump forced by the microprocessor (42), the destination instruction being an instruction of the instruction sequence.

7. (Currently amended) A device for transmitting digital messages between a monitoring circuit (18) integrated to on a microprocessor (42) and an analysis tool (24) via output terminals (22) comprising:

means of detection of a jump on execution of an instruction sequence by the microprocessor;

means for storing data characteristic of the detected jump;

means for determining a digital message based on the stored characteristic data, the digital message comprising a first set of bits (~~Feede~~) set to a first value if the jump is associated with a jump instruction of the instruction sequence for which data representative of the destination instruction address of the jump are explicitly indicated in the instruction, and set to a second value in the opposite case; and

means for transmitting the determined digital message;

~~characterized in that~~ wherein, when the first set of bits is set to the second value, the determination means is capable of comprising a second set of bits (~~Btype~~) in the digital message set to a third value identifying the jump from among several jump types.